

**CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY**

**FOR
DOLLAR-DENOMINATED FIXED INCOME
~~SHORT~~LIMITED-DURATION**

~~August 16, 2004~~~~December 9, 2005~~February 14, 2006

This Policy is effective immediately upon adoption and supersedes all previous dollar-denominated fixed income short duration policies.

I. PURPOSE

This document sets forth the investment policy ("the Policy") for the Dollar Denominated Fixed Income Program ("the Program"), ~~Short-Limited~~ Duration investment funds. The design of this Policy ensures that investors, managers, consultants, or other participants selected by the California Public Employees' Retirement System ("the System") take prudent and careful action while managing the Program. Additionally, use of this Policy provides assurance that there is sufficient flexibility in controlling investment risks and returns associated with this segment of the market.

This will be the controlling document for both the High Quality LIBOR Fund ("the HQL Fund") and the Short Duration Fund ("the SDF").

II. DOLLAR DENOMINATED FIXED INCOME, ~~SHORT~~LIMITED DURATION INVESTMENT FUNDS

A. The HQL Fund is designed to be a ~~short~~limited duration, highly liquid, ~~LIBOR-based~~ fund that can be used by CalPERS' Portfolio Managers as a way to invest in a ~~short~~limited duration asset that provides low volatility versus a ~~one-month LIBOR floating-rate based~~ benchmark.

1. Uses for the HQL Fund include, but are not limited to:
 - a. a stand-alone asset in the fixed income mortgage portfolio as a proxy for high coupon mortgage pass-throughs,
 - b. an asset in the securities lending portfolio that will be managed internally,

- c. the cash component of mortgage dollar roll transactions,
 - d. the cash component of the ~~the~~ [interest rate swap](#) transactions, and
 - e. the cash component of the Equity Dynamic Completion Fund transactions.
 - 2. The Statement of Investment Policy for Dollar-Denominated Fixed Income, High Quality LIBOR is attached as Attachment I.
- B. The SDF is designed to earn a return premium versus traditional ~~short~~limited duration assets through a modest increase in portfolio duration and by purchasing a broader universe of ~~short~~limited duration [securities](#) than those typically available to traditional money market portfolios. Expanding the allowable universe of ~~short~~limited duration securities provides the opportunity to increase return by taking advantage of some structural aspects inherent in the ~~short~~limited duration sector. Traditionally there are three strategies that provide incremental alpha opportunities for ~~short~~limited duration investors. These strategies include extending duration out the [yield curve](#), accepting lower liquidity, and investing down the credit spectrum. The SDF will be designed to take advantage of all three strategies within a controlled manner and will result in a modest increase in risk relative to the HQL fund.
- 1. Uses for the SDF include, but are not limited to:
 - a. the “core” asset of the internally managed securities lending portfolio,
 - b. a stand-alone asset in the fixed income mortgage portfolio as a proxy for high coupon mortgage pass-throughs,
 - c. the cash component of mortgage dollar roll transactions and interest rate swap transactions.
 - 2. The key determinant for the use of the SDF is the identification of a pool of funds that require less liquidity than that provided by the HQL fund. It is anticipated that the majority of CalPERS sub-strategies desiring ~~short~~limited-duration assets will use both the HQL fund and SDF at various times depending on liquidity needs.

3. The Statement of Investment Policy for Dollar-Denominated Fixed Income, Short Duration Fund is attached as Attachment II.

III. FUND CHARACTERISTICS AND SYSTEM USES

The HQL Fund and the SDF will both be utilized as ~~short~~limited-duration investment alternatives by various asset classes within the System.

- A. Attachment III outlines the basic differences in the two funds.
- B. Attachment IV details how the ~~short~~limited-duration alternatives are utilized as assets within the System.

Approved by the Policy Subcommittee: June 13, 2003
Adopted by the Investment Committee: August 18, 2003
Revised by the Policy Subcommittee: June 11, 2004
Adopted by the Investment Committee: August 16, 2004
Revised by the Policy Subcommittee: December 9, 2005
Adopted by the Investment Committee: February 14, 2006

Attachment I

**CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY**

**FOR
DOLLAR-DENOMINATED FIXED INCOME
HIGH QUALITY LIBOR**

August 16, 2004~~December 9, 2005~~February 14, 2006

This Policy is effective immediately upon adoption and supersedes all previous dollar-denominated fixed income High Quality LIBOR policies.

I. PURPOSE

This document sets forth the investment policy ("the Policy") for Dollar Denominated Fixed Income Program ("the Program"), High Quality LIBOR fund ("the HQL Fund"). The design of this Policy ensures that investors, managers, consultants, or other participants selected by the California Public Employees' Retirement System ("the System") take prudent and careful action while managing the Program. Additionally, use of this Policy provides assurance that there is sufficient flexibility in controlling investment risks and returns associated with this segment of the market.

II. STRATEGIC OBJECTIVE

Achieving the highest total rate of return possible, consistent with a prudent level of risk and the liabilities of the System is the strategic objective of the Program. The principal functional objectives for the HQL Fund are liquidity and preservation of capital.

The HQL Fund -shall be managed to accomplish the following:

- A. Diversify the System's overall investment Program;
- B. Consider solely the interest of the System's participants and their beneficiaries in accordance with California State Law;
- C. Provide stable ~~short~~limited duration returns;
- D. Enhance the System's total return.

III. RESPONSIBILITIES AND DELEGATIONS

- A. The **System's Investment Committee** ("the Investment Committee") is responsible for approving and amending the Policy. The Investment Committee delegates the responsibility for administering the Program to the Investment Staff through the Delegation of Authority (Delegation Nos. 89-13 and 95-50).
- B. The **System's Investment Staff's** ("the Staff") duties include, but are not limited to, the following:
1. Developing and recommending the Policy to the Investment Committee;
 2. Developing and maintaining a procedures manual, subject to periodic reviews and updates, outlining Staff operational procedures used in implementing this Policy;
 3. Implementing and adhering to the Policy;
 4. Auditing the securities trading activities of portfolio managers and traders by the [Senior Investment Officer, Fixed Income](#);
 5. Reporting immediately all violations of the Policy to the [Chief Investment Officer](#); the violation reporting process shall be as follows:
 - a. The Staff shall report orally, or in writing, all violations immediately to the Senior Investment Officer, Fixed Income.
 - b. The Senior Investment Officer, Fixed Income shall immediately report orally, or in writing, any violation verbally to the Chief Investment Officer and the Assistant Executive Officer.
 - c. As a follow-up to the verbal report, the Staff shall prepare a written report of any violation within a time period not exceeding 30 days.
 - d. The Chief Investment Officer shall determine the appropriate means of further reporting based on his or her judgment of the magnitude, sensitivity and severity of the violation.

- e. All violations shall be reported to the Investment Committee as part of a quarterly report agenda item on the Investment Committee's regular agenda. The report shall coincide with the regular quarterly reports of the CalPERS [general pension consultant](#).
 - f. Depending on the violation, and at the discretion of the Chief Investment Officer, reporting may also be made to the Investment Committee. The report may be made as a separate agenda item or as a portion of the Chief Investment Officer's Report at the next scheduled Investment Committee meeting.
- 6. Purchasing only securities outlined in the Policy; and
 - 7. Reporting to the System's Investment Committee at least quarterly about the following issues:
 - a. Portfolio duration;
 - b. Sector weightings;
 - c. Fixed and floating rate breakout;
 - d. Security [rating](#) scales (e.g. AAA%, AA%);
 - e. An exceptions report that covers Policy violations
 - 8. Reporting internally to senior management concerning the implementation of this Policy. This report shall be prepared monthly to include, but is not limited to, the following areas:
 - a. Current market value and allocations by sector;
 - b. Aggregate and individual portfolio characteristics and risks (including duration) compared to guidelines; and
 - c. An exception report covering delinquencies, [defaults](#), and deteriorating credits.
 - 9. Reporting to the Investment Committee on the performance of the Program as needed and monitoring implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes, and all violations of the Policy immediately, and in writing, to the Investment Committee,

along with an explanation and appropriate recommendation for corrective action.

- C. The **General Pension Consultant** is responsible for monitoring, evaluating, and reporting to the Investment Committee, at least quarterly, about the internally and [externally managed](#) fixed income performance relative to the benchmark and Policy guidelines.

IV. PERFORMANCE OBJECTIVE

Slightly exceed the return of the ~~PERS Custom Daily LIBOR Index (State Street Bank code VI7)~~a Federal Funds based index while maintaining a high level of diversification and liquidity.

V. INVESTMENT APPROACHES AND PARAMETERS

A. Investment Approach

Identifying opportunities across ~~short~~limited duration bond market sectors and investing where risks are both understood and manageable while maintaining credit quality, duration, [convexity](#), and liquidity as specified in this Policy is the investment approach of the HQL Fund. Given the mandate for the HQL Fund to be a high liquidity, preservation of capital fund, measured versus a ~~LIBOR Federal Funds based~~ benchmark, it is expected that floating rate AAA-rated ~~asset-backed~~ [securities](#) will represent a majority of the fund's holdings.

B. Specific Risk Parameters

The System shall manage the following major categories of fixed income risk:

1. Benchmark Risk addresses whether the ~~PERS Custom Daily LIBOR Index~~ Federal Funds index is the appropriate reference point for the HQL Fund.
2. Interest Rate Risk is the price volatility produced by changes in the overall level of interest rates as measured by an option-adjusted duration. Duration shall be maintained at a level that does not exceed 90 days due to the stable return mandate of the HQL Fund. Decisions shall be managed in a controlled manner using historical [real return relationships](#) and [economic analysis](#).

Maturity and Duration Constraints

Asset	Maturity Limits
US Treasury & Govt. Sponsored	91 days
<u>Repurchase Agreements</u>	
US Treasury/ <u>Agency</u> Collateral	3 months
Non US Treasury/Agency Collateral	1 month
AAA Rated Fixed Rate Asset-Backed <u>Structured Securities</u>	90 days <u>WAL</u>
AAA Rated Floating Rate Asset-Backed <u>Structured Securities</u>	5 year WAL
AAA Rated Mortgage & Commercial Mortgage-Backed Securities	
—Fixed Rate	90 days
—Floating Rate	5 year WAL
<u>Money Market Securities</u>	
> = A1/P1	90 days
< A1/P1	35 days
<u>Corporate & Yankee Sovereign</u> (AAA rated)	90 days
Corporate (less than AAA rated)	35 days
Yankee Sovereign (less than AAA rated)	35 days

3. Yield Curve Risk is the price changes induced by the changing slope of the yield curve. Yield curve risk shall be managed in a controlled, disciplined fashion by employing break-even, economic analysis, partial duration, and principal component analysis.
4. Convexity Risk is the downside risk of an equal move up or down in interest rates, causing greater price loss than price gain. Convexity shall be managed using option-adjusted and scenario analyses.

5. Sector and Asset Risk is the risk of holding sectors and assets proportionally different from the Index. Based on the economic outlook, [historical factors](#), and [break-even analysis](#), Staff shall estimate the impact on various sectors' and assets' spreads and make allocations accordingly.

Asset and Sector Diversification

Asset / Counterparty	Diversification Limits	
	1 Day Maturity	> 1 Day Maturity
US Treasury & Govt. Sponsored	No Restriction	No Restriction
2a-7 Money Market Funds	No Restriction	No Restriction
State Street Bank's STIF	No Restriction	No Restriction
Repurchase Agreements	25%	25%
AAA Rated Structured Securities		10%
AAA Rated Fixed Rate Asset-Backed Securities	10%	5%
AAA Rated Floating Rate Asset Backed Securities	10%	5%
AAA Rated Mortgage & Commercial Mortgage-Backed	10%	5%
Money Market Securities		
— > = A1/P1	10%	5%
— < A1/P1	4%	2%
Corporate & Yankee Sovereign (AAA rated)	10%	5 10%
Corporate (less than AAA rated)	4%	2 5%
Yankee Sovereign (less than AAA rated)	4%	2 5%
<u>Money Market Securities</u>		
<u>> = A1/P1 (next business day maturity)</u>		15%
<u>> = A1/P1</u>		10%

<u>< A1/P1 (next business day maturity)</u>	<u>10%</u>
<u>< A1/P1</u>	<u>5%</u>

Sector	Diversification Limits	
	1 Day Maturity	> 1 Day Maturity
Floating Rate	No Restriction	No Restriction
Fixed Rate (greater than 35 day maturity)	No Restriction	20%
US Treasury & Govt. Sponsored	No Restriction	No Restriction
2a-7 Money Market Funds	No Restriction	No Restriction
State Street Bank's STIF	No Restriction	No Restriction
Repurchase Agreements	No Restriction	No Restriction
AAA Rated Fixed Rate Asset-Backed <u>Structured Securities</u>	No Restriction	20%
AAA Rated Floating Rate Asset-Backed <u>Structured Securities</u>	No Restriction	No Restriction
Credit Card <u>Collateral</u>	75%	75%
Auto <u>Collateral</u>	75%	75%
Student Loan <u>Collateral</u>	75%	75%
<u>Any Other Asset-Back Individual Structured Collateral</u>	15%	15% <u>50%</u>
<u>Sector s</u>		
AAA Rated Mortgage & Commercial Mortgage-Backed	15%	15%
Money Market Securities		
— > = A1/P1	No Restriction	No Restriction
— < A1/P1	25%	10%
Any One <u>Corporate Sector</u>	50%	15%
Total Yankee Sovereign Sector	50%	15%
Total Corporate/Yankee Sovereign	50%	50%
<u>Money Market Securities</u>		
<u>> = A1/P1</u>		<u>No Restriction</u>
<u>< A1/P1 (next business day maturity)</u>		<u>50%</u>

< A1/P1

25%

6. Credit Risk is the uncertainty surrounding the borrower's ability to repay its obligations. Credit risk shall be actively managed on a risk/return basis. A downgrading of a security, which causes a violation in the guidelines, shall not require an immediate sale if the Senior Investment Officer, ~~of~~ Fixed Income believes that no further risk of credit deterioration exists or the sale diminishes the total return to the System. The internal research Staff and the external rating agencies shall analyze such situations to ensure that an informed decision is made. The following is the minimum quality for each of the sectors.

Asset / Counterparty	Minimum Credit Rating
US Treasury & Govt. Sponsored	AAA
Repurchase Agreements	A1/P1
Asset-Backed <u>Structured</u> Securities	AAA
Mortgage & Commercial Mortgage-Backed Securities	AAA
Money Market Securities	A2/P2
Corporate Securities	Baa1/BBB+
Yankee Sovereign Securities	A3/A-

7. Structure Risk arises from the options implicit in [bonds](#) (e.g., callable and optional sinking fund bonds) or the rules governing cash flow that differs from expectations. Structure risk shall be managed using option adjusted and scenario analysis.
8. Reinvestment Risk is the uncertain future yield opportunities for investing funds that become available due to call, maturity, or coupon payments. Reinvestment risk shall be managed through [call risk](#) and cash flow analysis.
9. Liquidity risk is the ease with which an issue or specified amount can be sold at or near prevailing market prices. Considering the HQL Fund's mandate as a liquid, ~~short~~ limited duration fund, high liquidity is a major requirement.

10. Currency Risk is the price volatility emanating from the value of the U.S. dollar relative to other currencies of the world. To reduce this risk, all securities shall be denominated in U.S. dollars.

C. Restrictions and Prohibitions

1. Except for U.S. Treasuries and Agencies, investments in a AAA-rated single issuer with a maturity that exceeds one business day shall not exceed ~~5~~ 10% of the HQL Fund during the holding period for such investment. Exceptions to this restriction are 2a-7 money market funds, State Street Bank's STIF, and repurchase agreements (See Section V. B. 5.) For ~~asset-backed~~ structured securities, each separate trust (pool of assets) is defined as a separate issuer.
2. Investments in any non-AAA rated single issuer with a maturity that exceeds one business day shall not exceed ~~2.5~~ 5% of the HQL Fund during the holding period for such investment. ~~For asset-backed securities, each separate trust (pool of assets) is defined as a separate issuer.~~
3. The Option adjusted duration of the HQL Fund shall not exceed 90 days.
4. Non-investment grade securities are prohibited.
5. CBO~~r~~ and CLO investments are prohibited.
6. Tobacco company investments are prohibited.
7. Privately Placed Investment Grade Corporate Bonds are prohibited
8. Collateralized Mortgage Obligations (CMO) are prohibited
9. Adjustable rate securities, which are not allowed include, but are not limited to, the following:
 - a. "Inverse floaters," "leveraged floaters" and any securities whose interest rate reset provisions are based on a formula that magnifies changes in interest rates.

- b. “Constant Maturity Treasury (CMT) floaters” and securities whose interest rate reset provisions are tied to long-term interest rates so that a change in the slope of the yield curve could result in the value of the instrument falling below par.
- c. “Dual index floaters” and securities whose interest rate reset provisions are tied to more than one index so that a change in the relationship between these indexes may result in the value of the instrument falling below par.
- d. “Cost of Funds Index (COFI) floaters,” “prime floaters,” and securities whose interest rate reset provision is tied to an index materially lagging short-term interest rates.

~~10. Corporate and Sovereign Debt with an OAS duration over 0.25 years are prohibited.~~

~~11. Home Equity asset-backed securities are prohibited.~~

~~12. Manufactured Housing asset-backed securities are prohibited.~~

D. Authorized Securities

- 1. U.S. Treasury and [Government Sponsored Securities](#) (including derivative securities whose deliverable instrument is a U.S. Treasury or government obligation) excluding mortgages and [mortgage-backed securities \(MBS\)](#)
- 2. Money market instruments, including obligations of the U.S. Government and its agencies, and domestic money market instruments ([commercial paper](#), bank time deposits, [certificates of deposit](#), and [banker's acceptances](#)). Non-domestically domiciled money market issuers must be domiciled in countries defined in the Glossary under Yankee Sovereign.
- 3. Repurchase Agreements— and —[Tri-Party Repurchase Agreements](#) (repos and tri-party repos) collateralized at 102% by debt obligations of the U.S. Government or its agencies (this does not include mortgage-backed securities). Repurchase agreements and Tri-Party Repurchase

agreements collateralized at 105% by A3/A- or higher rated corporate debt or AAA ~~asset-backed structured~~ securities or commercial paper with a minimum A1/P1 rating. Repurchase agreements and Tri-Party Repurchase agreements must be marked-to-market daily. Repurchase agreements and Tri-Party Repurchase agreements must be with counterparties rated at least A1/P1. Mortgage-backed securities are prohibited. Collateral for Tri-party repurchase agreements must be a minimum of \$1 million in size.

4. Notes, bonds, and debentures issued by the U.S. Government and its agencies, U.S. corporations, Canadian, supranational, and Yankee Sovereign entities subject to the maturity and credit quality limitations specified in this policy.
5. Money market funds as defined under SEC Regulation 270.2a-7.
6. Structured securities with a minimum credit rating of AAA. Subject to the maturity constraints specified in this policy.
- ~~6. Asset-backed Structured securities with a minimum credit rating of AAA. Subject to the maturity constraints specified in this policy.~~
7. Floating rate and variable rate securities, subject to maturity, credit quality, and reset limitations specified in this policy. The HQL Fund can invest in adjustable rate securities tied to LIBOR, Fed Funds, Treasury Bills, and Commercial Paper Indices.
- ~~7. Commercial mortgage-backed securities with a minimum credit rating of AAA. Subject to the maturity constraints specified in this policy.~~
- ~~9. Floating rate and variable rate securities, subject to maturity, credit quality, and reset limitations specified in this policy. The HQL Fund can invest in adjustable rate securities tied to LIBOR, Fed Funds, Treasury Bills, and Commercial Paper Indices.~~

VI. BENCHMARK

The benchmark for the HQL Fund shall be the PERS Custom Daily LIBOR a Federal Funds based index. Index (State Street Bank code V17).

VII. GENERAL

- A. Investors, managers, consultants, or other participants selected by the System shall make all calculations and computations on a market value basis as recorded by the System's [Custodian](#).
- B. For securities with periodic principal payments, the [weighted-average days to maturity](#) shall be calculated from the [evaluation date](#) to the date of the security's [average life](#).
- C. The portfolio weighted-average days to maturity shall be calculated from the evaluation date to the date of the next coupon reset for floating rate securities.

VIII. DERIVATIVES AND LEVERAGE POLICY

All transactions involving [derivatives](#) and [leverage](#) are governed by the California Public Employees' Retirement System Statement of Investment Policy For Derivatives - Investment Office. In addition to the restrictions defined in the Derivatives Policy, the following conditions apply specifically to the HQL Fund.

A. [Financial Futures](#), [Swaps](#), and [Options](#)

- 1. [Short selling](#) of securities is prohibited, except in financial futures (as outlined in Section VIII. A. 4. of this Policy);
- 2. Leverage is prohibited except [futures](#) position where there is an associated cash position (which together creates a synthetic bond);
- 3. The Staff may buy or sell the following fixed income related derivatives: financial futures including [Eurodollar futures](#), [Total Return Swaps](#), [Index Swaps](#), [Credit Default Swaps](#), [Interest Rate Swaps](#), and [over-the-counter](#) options as specified in Section V. D. 1. of this Policy; and
- 4. Acceptable strategies include bona fide [hedges](#) (to help achieve the target durations) and strategies that result in a more efficient method of implementing the investment objectives of the Portfolio.

B. Restrictions and Prohibitions

- 1. Uncovered call writing is prohibited.

2. [Speculation](#) or [arbitrage](#) between two derivatives is prohibited. If a derivative is more attractively priced than the underlying security, the transaction is considered a substitution.

C. Counterparty Exposure for Options, Swaps and Futures

1. Transactions shall be executed with only domestic or non-U.S. brokers registered in the U.S. or the U.K. with a short-term debt rating of at least A1 ([Standard & Poor's](#)) and at least P1 ([Moody's](#)), or rated on a long-term at least A3 (Moody's) and at least A- (Standard & Poor's). The Internal Research Staff shall actively review these brokers.

IX. GLOSSARY OF TERMS

~~The Fixed Income Glossary of Terms is referenced in the System's Master Glossary of Terms.~~ Definitions for key words used in this policy are located in the Fixed Income Glossary of Terms which is included in the System's Master Glossary of Terms.

Attachment II

**CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY**

**FOR
DOLLAR-DENOMINATED FIXED INCOME
SHORT DURATION FUND**

August 16, 2004December 9, 2005February 14, 2006

This Policy is effective immediately upon adoption and supersedes all previous dollar-denominated fixed income Short Duration fund policies.

I. PURPOSE

This document sets forth the investment policy ("the Policy") for Dollar Denominated Fixed Income Program ("the Program"), Short Duration Fund ("the SDF"). The design of this Policy ensures that investors, managers, consultants, or other participants selected by the California Public Employees' Retirement System ("the System") take prudent and careful action while managing the Program. Additionally, use of this Policy provides assurance that there is sufficient flexibility in controlling investment risks and returns associated with this segment of the market.

II. STRATEGIC OBJECTIVE

Achieving the highest total rate of return possible, consistent with a prudent level of risk and the liabilities of the System is the strategic objective of the Program. The principal functional objective of the SDF is to provide total rates of return in excess of the benchmark while maintaining prudent levels of liquidity.

The SDF shall be managed to accomplish the following:

- A. Diversify the System's overall investment Program;
- B. Consider solely the interest of the System's participants and their beneficiaries in accordance with California State Law;
- C. Provide stable ~~short~~limited duration returns.
- D. Enhance the System's total return.

III. RESPONSIBILITIES AND DELEGATIONS

- A. The **System's Investment Committee** ("the Investment Committee") is responsible for approving and amending the Policy. The Investment Committee delegates the responsibility for administering the Program to the Investment Staff through the Delegation of Authority (Delegation Nos. 89-13 and 95-50).
- B. The **System's Investment Staff's** ("the Staff") duties include, but are not limited to, the following:
1. Developing and recommending the Policy to the Investment Committee;
 2. Developing and maintaining a procedures manual, subject to periodic reviews and updates, outlining Staff operational procedures used in implementing this Policy;
 3. Implementing and adhering to the Policy;
 4. Auditing the securities trading activities of portfolio managers and traders by the Senior Investment Officer, Fixed Income;
 5. Reporting immediately all violations of the Policy to the Chief Investment Officer; the violation reporting process shall be as follows:
 - a. The Staff shall report orally, or in writing, all violations immediately to the Senior Investment Officer, Fixed Income.
 - b. The Senior Investment Officer, Fixed Income shall immediately report orally, or in writing, any violation verbally to the Chief Investment Officer and the Assistant Executive Officer.
 - c. As a follow-up to the verbal report, the Staff shall prepare a written report of any violation within a time period not exceeding 30 days.
 - d. The Chief Investment Officer shall determine the appropriate means of further reporting based on his or her judgment of the magnitude, sensitivity and severity of the violation.

- e. All violations shall be reported to the Investment Committee as part of a quarterly report agenda item on the Investment Committee's regular agenda. The report shall coincide with the regular quarterly reports of the CalPERS general pension consultant.
 - f. Depending on the violation, and at the discretion of the Chief Investment Officer, reporting may also be made to the Investment Committee. The report may be made as a separate agenda item or as a portion of the Chief Investment Officer's Report at the next scheduled Investment Committee meeting.
- 6. Purchasing only securities outlined in the Policy; and
- 7. Reporting to the System's Investment Committee at least quarterly about the following issues:
 - a. Portfolio duration;
 - b. Sector weightings;
 - c. Fixed and floating rate breakout;
 - d. Security rating scales (e.g. AAA%, AA%);
 - e. An exceptions report that covers Policy violations
- 8. Reporting internally to senior management concerning the implementation of this Policy. This report shall be prepared monthly to include, but is not limited to, the following areas:
 - a. Current market value and allocations by sector;
 - b. Aggregate and individual portfolio characteristics and risks (including duration) compared to guidelines; and
 - c. An exception report covering delinquencies, defaults, and deteriorating credits.
- 9. Reporting to the Investment Committee on the performance of the Program as needed and monitoring implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes, and all violations of the Policy immediately, and in writing, to the Investment Committee,

along with an explanation and appropriate recommendation for corrective action.

- C. The **General Pension Consultant** is responsible for monitoring, evaluating, and reporting to the Investment Committee, at least quarterly, about the internally and externally managed fixed income performance relative to the benchmark and Policy guidelines.

IV. PERFORMANCE OBJECTIVE

Moderately exceed the return of ~~the PERS Custom Daily LIBOR Index (State Street Bank code VI7)~~ a Federal Funds based index while maintaining a high level of diversification and prudent liquidity.

V. INVESTMENT APPROACHES AND PARAMETERS

A. Investment Approach

Identifying opportunities across ~~short~~limited duration bond market sectors and investing where risks are both understood and manageable while maintaining credit quality, duration, convexity, and liquidity as specified in this Policy is the investment approach of SDF. Given the mandate for the SDF to be a medium liquidity, total rate of return fund, measured versus a ~~LIBOR~~ Federal Funds based benchmark, it is expected that floating rate ~~asset-backed~~ securities will represent a majority of the fund's holdings.

B. Specific Risk Parameters

The System shall manage the following major categories of fixed income risk:

1. Benchmark Risk addresses whether ~~the PERS Custom Daily LIBOR Index~~ a Federal Funds based index is the appropriate reference point for the SDF.
2. Interest Rate Risk is the price volatility produced by changes in the overall level of interest rates as measured by an option-adjusted duration. Duration shall be maintained at a level that does not exceed 180 days. Decisions shall be managed in a controlled manner using historical real return relationships and economic analysis.

Maturity and Duration Constraints

Asset	Floating Rate Maturity Limits	Fixed Rate Maturity Limits
US Treasury & Govt. Sponsored		14 months <u>2</u> <u>years</u>
Repurchase Agreements		
US Treasury/Agency Collateral	3 months	
Non US Treasury/Agency Collateral	1 month	
AAA Rated Asset-Backed <u>Structured</u> Securities	5-7 year WAL	14 month <u>2</u> year WAL
Non-AAA Rated Asset-Backed <u>Structured</u> Securities	<u>5</u> year WAL	<u>18</u> month WAL
Credit Card	3-5 year WAL	14 18 month WAL
— Auto	3 year WAL	14 month WAL
— <u>Stranded Assets</u>	3 year WAL	14 month WAL
— Real Estate Based	3 year WAL	14 month WAL
— Equipment	3 year WAL	14 month WAL
— Recreational Vehicles	3 year WAL	14 month WAL
— Student Loan	3 year WAL	14 month WAL
— All Other Collateral	Not Allowed	Not Allowed
Mortgage/Commercial Mortgage-Backed Securities <u>Note: Mortgage-backed securities maximum WAL</u> <u>calculation to be run at 100 PSA</u>		
AAA Rated	5 year WAL	14 month WAL
— Non-AAA Rated	3 year WAL	14 month WAL
Money Market Securities		
> = A1/P1		90 270 days
< A1/P1		35 <u>90</u> days
Corporate & Yankee Sovereign (AAA rated)	3-5 Years	14 months <u>2</u> <u>years</u>
Corporate <u>& Yankee Sovereign</u> (less than AAA)	3-4 Years	14 <u>18</u> months

rated)

~~Yankee Sovereign (less than AAA rated)~~

~~3 Years~~

~~14 months~~

3. Yield Curve Risk is the price changes induced by the changing slope of the yield curve. Yield curve risk shall be managed in a controlled, disciplined fashion by employing break-even, economic analysis, partial duration, and principal component analysis.
4. Convexity Risk is the downside risk of an equal move up or down in interest rates, causing greater price loss than price gain. Convexity shall be managed using option-adjusted and scenario analyses.
5. Sector and Asset Risk is the risk of holding sectors and assets proportionally different from the Index. Based on the economic outlook, historical factors, and break-even analysis, Staff shall estimate the impact on various sectors' and assets' spreads and make allocations accordingly.

Asset and Sector Diversification

Asset / Counterparty	Diversification Limits	
	1-Day Maturity	>1-Day Maturity
US Treasury & Govt. Sponsored	No Restriction	No Restriction
2a-7 Money Market Funds	No Restriction	No Restriction
State Street Bank's STIF	No Restriction	No Restriction
Repurchase Agreements	25%	25%
AAA Rated Asset-Backed Structured Securities		
Credit Card (less than or = 1.5 year WAL)		
Less than or = 1.5 year WAL	10%	40 <u>15%</u>
Greater than 1.5 year WAL	10%	5 <u>10%</u>
All Other Asset Backs	10%	5%
Non-AAA Rated Asset-Backed Structured Securities		
Credit Card	4%	2 <u>5%</u>
Auto	4%	2%
Stranded Assets	4%	2%
Real Estate Based	4%	2%
Equipment	4%	2%
Recreational Vehicles	4%	2%
Student Loan	4%	2%
All Other Collateral	Not Allowed	Not Allowed
Mortgage/Commercial Mortgage-Backed Securities		
AAA Rated	10%	5%
Non-AAA Rated	4%	2%
Money Market Securities		
> = A1/P1	10%	5%
< A1/P1	4%	2%
Corporate & Yankee Sovereign (AAA rated)	10%	5 <u>10%</u>
Corporate & <u>Yankee Sovereign</u> (less than AAA rated)	4%	2 <u>5%</u>
Yankee Sovereign (less than AAA rated)	4%	2%

Money Market Securities

<u>> = A1/P1 (next business day maturity)</u>	<u>15%</u>
<u>> = A1/P1</u>	<u>10%</u>
<u>< A1/P1 (next business day maturity)</u>	<u>10%</u>
<u>< A1/P1</u>	<u>5%</u>

Sector	Diversification 1 Day Maturity	Sector Limits > 1 Day Maturity
Floating Rate	No Restriction	No Restriction
Fixed Rate (greater than 35 day maturity <u>WAL</u>)	No Restriction	20 <u>35%</u>
Non-AAA Rated Securities	No Restriction	50%
US Treasury & Govt. Sponsored	No Restriction	No Restriction
2a-7 Money Market Funds	No Restriction	No Restriction
State Street Bank's STIF	No Restriction	No Restriction
Repurchase Agreements	No Restriction	No Restriction
AAA Rated Asset-Backed <u>Structured</u> Securities	No Restriction	No Restriction
Credit Card <u>Collateral</u>	75%	75%
Auto <u>Collateral</u>	75%	75%
Student Loan <u>Collateral</u>	75%	75%
<u>Home Equity Loan Collateral</u>		<u>75%</u>
<u>Any Other Asset-Back Individual Structured Collateral</u>	20%	20 <u>50%</u>
<u>Sectors</u>		

Non-AAA Rated ~~Asset-Backed~~ Structured Securities

Credit Card Each Sector (e.g., credit card, auto)	10%	10 20%
— Auto	10%	10%
— Stranded Assets	10%	10%
— Real Estate Based	10%	10%
— Equipment	10%	10%
— Recreational Vehicles	10%	10%
— Student Loan	10%	10%
— All Other Collateral	Not Allowed	Not Allowed

Mortgage/Commercial Mortgage-Backed Securities	25%	25%
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Money Market Securities

— \geq A1/P1	No Restriction	No Restriction
— $<$ A1/P1	25%	15%

Any One Corporate Sector	50%	15%
Total Yankee Sovereign Sector	50%	15%
Total Corporate/Yankee Sovereign	50%	50%

Money Market Securities

<u>\geq A1/P1</u>	<u>No Restriction</u>	
<u>$<$ A1/P1 (next business day maturity)</u>		<u>50%</u>
<u>$<$ A1/P1</u>		<u>25%</u>

6. Credit Risk is the uncertainty surrounding the borrower's ability to repay its obligations. Credit risk shall be actively managed on a risk/return basis. A downgrading of a security, which causes a violation in the guidelines, shall not require an immediate sale if the Senior Investment Officer, ~~of Fixed Income~~ believes that no further risk of credit deterioration exists or the sale diminishes the total return to the System. The internal research Staff and the external rating agencies shall analyze such situations to ensure that an informed decision is made. The following is the minimum quality for each of the sectors.

Asset / Counterparty	Minimum Credit Rating
US Treasury & Govt. Sponsored	AAA
Repurchase Agreements	A1/P1
Asset-Backed <u>Structured</u> Securities	<u>Baa2 or BBB</u>
— Credit Card	Baa2 or BBB
— Auto	Baa2 or BBB
— Stranded Assets	Baa2 or BBB
— Real Estate Based	Baa2 or BBB
— Equipment	Baa2 or BBB
— Recreational Vehicles	Baa2 or BBB
— Student Loan	Baa2 or BBB
— All Other Collateral	AAA
Mortgage/Commercial Mortgage-Backed Securities	A3 or A-
Money Market Securities	A2/P2
Corporate Securities	Baa1/BBB+
Yankee Sovereign Securities	A3/A-

7. Structure Risk arises from the options implicit in bonds (e.g., callable and optional sinking fund bonds) or the rules governing cash flow that differs from expectations. Structure risk shall be managed using option adjusted and scenario analysis.
8. Reinvestment Risk is the uncertain future yield opportunities for investing funds that become available due to call, maturity, or coupon payments. Reinvestment risk shall be managed through call risk and cash flow analysis.
9. Liquidity risk is the ease with which an issue or specified amount can be sold at or near prevailing market prices. Considering the SDF's mandate as a ~~short~~limited duration fund that will provide prudent liquidity, liquidity is a relevant requirement for the SDF.

10. Currency Risk is the price volatility emanating from the value of the U.S. dollar relative to other currencies of the world. To reduce this risk, all securities shall be denominated in U.S. dollars.

C. Restrictions and Prohibitions

1. ~~1.~~ Except for U.S. Treasuries and Agencies, investments in a AAA-rated single issuer with a maturity that exceeds one business day shall not exceed ~~5~~ 10% of the SDF during the holding period for such investment. Exceptions to this restriction are 2a-7 money market funds, State Street Bank's STIF, repurchase agreements and ~~credit card~~ asset-backed structured securities that have average lives less than or equal to 1.5 years (See section V. B. 5.) For ~~asset-backed structured~~ securities, each separate trust (pool of assets) is defined as a separate issuer.
2. ~~2.~~ Investments in any non-AAA rated single issuer with a maturity that exceeds one business day shall not exceed ~~2.5~~ 5% of the SDF during the holding period for such investment. For ~~asset-backed structured~~ securities, each separate trust (pool of assets) is defined as a separate issuer.
3. ~~3.~~ The Option adjusted duration of the SDF must not exceed 180 days.
4. ~~4.~~ Non-investment grade securities are prohibited.
- ~~5.~~ CBO/CLO investments are prohibited.
5. ~~6.~~ Tobacco company investments are prohibited.
6. ~~7.~~ Privately Placed Investment Grade Corporate Bonds are prohibited
- ~~8.~~ Collateralized Mortgage Obligations (CMO) are prohibited
7. ~~9.~~ Adjustable rate securities, which are not allowed include, but are not limited to, the following:
 - a. "Inverse floaters," "leveraged floaters" and any securities whose interest rate reset provisions are based on a formula that magnifies changes in interest rates.

- b. “Constant Maturity Treasury (CMT) floaters” and securities whose interest rate reset provisions are tied to long-term interest rates so that a change in the slope of the yield curve could result in the value of the instrument falling below par.
- c. “Dual index floaters” and securities whose interest reset provisions are tied to more than one index so that a change in the relationship between these indexes may result in the value of the instrument falling below par.
- d. “Cost of Funds Index (COFI) floaters,” and securities whose interest rate reset provision is tied to an index materially lagging short-term interest rates.

D. Authorized Securities

- 1. ~~1.~~—U.S. Treasury and Government Sponsored Securities (including derivative securities whose deliverable instrument is a U.S. Treasury or government obligation) excluding mortgages and mortgage-backed securities (MBS).
- 2. ~~2.~~—Money market instruments, including obligations of the U.S. Government and its agencies, and domestic money market instruments (commercial paper, bank time deposits, certificates of deposit, and banker’s acceptances). Non-domestically domiciled money market issuers must be domiciled in countries defined in the Glossary under Yankee Sovereign.
- 3. ~~3.~~—Repurchase Agreements and Tri-Party Repurchase Agreements (repos and tri-party repos) collateralized at 102% by debt obligations of the U.S. Government or its agencies (this does not include mortgage-backed securities). Repurchase agreements and Tri-Party Repurchase agreements collateralized at 105% by A3/A- or higher rated corporate debt or AAA ~~asset-backed~~ structured securities or commercial paper with a minimum A1/P1 rating. Repurchase agreements and Tri-Party Repurchase agreements must be marked-to-market daily. Repurchase agreements and Tri-Party Repurchase agreements must be with counterparties rated at least A1/P1. Mortgage-backed securities are prohibited. Collateral for Tri-party repurchase agreements must be a minimum of \$1 million in size.

- ~~4.~~ 4. — Notes, bonds, and debentures issued by the U.S. Government and its agencies, U.S. corporations, Canadian, supranational, and Yankee Sovereign entities subject to the maturity and credit quality limitations specified in this policy.
- ~~5.~~ 5. — Money market funds as defined under SEC Regulation 270.2a-7.
- ~~6.~~ 6. — ~~Asset-backed Structured~~ securities with a minimum credit rating of Baa2/BBB whose underlying loans or receivables are against automobile loans and leases, recreation vehicles, stranded assets, credit cards, student loans, real estate, or equipment loans and leases. Subject to the maturity constraints detailed in this policy.
- ~~7.~~ Floating rate and variable rate securities, subject to maturity, credit quality, and reset limitations specified in this policy. The SDF can invest in adjustable rate securities tied to LIBOR, Fed Funds, Treasury Bills, and Commercial Paper Indices.
- ~~6.~~
- ~~7.~~ Asset-backed securities not collateralized by assets detailed in Section V. D. 6. must have a minimum credit rating of AAA. Subject to the maturity constraints detailed in this policy.
- ~~8.~~ Commercial mortgage backed securities with a minimum credit rating of A3/A. Subject to the maturity constraints detailed in this policy.
- ~~11.~~ Floating rate and variable rate securities, subject to maturity, credit quality, and reset limitations specified in this policy. The SDF can invest in adjustable rate securities tied to LIBOR, Fed Funds, Treasury Bills, and Commercial Paper Indices.
- ~~10.8.~~ [Participation shares in CalPERS construction loan program](#) with BRIDGE Housing Corporation.
9. CalPERS Asset-Based Loan (ABL) program investments.

VI. BENCHMARK

The benchmark for the SDF shall be the ~~PERS Custom Daily LIBOR Index (State Street Bank code VI7)~~, a Federal Funds based index.

VII. GENERAL

- A. Investors, managers, consultants, or other participants selected by the System shall make all calculations and computations on a market value basis as recorded by the System's Custodian.
- B. For securities with periodic principal payments, the weighted-average days to maturity shall be calculated from the evaluation date to the date of the security's average life.
- C. The portfolio weighted-average days to maturity shall be calculated from the evaluation date to the date of the next coupon reset for floating rate securities.

VIII. DERIVATIVES AND LEVERAGE POLICY

All transactions involving derivatives and leverage are governed by the California Public Employees' Retirement System Statement of Investment Policy For Derivatives - Investment Office. In addition to the restrictions defined in the Derivatives Policy, the following conditions apply specifically to the SDF.

A. Financial Futures, Swaps, and Options

- 1. Short selling of securities is prohibited, except in financial futures (as outlined in Section VIII. A. 4. of this Policy);
- 2. Leverage is prohibited except futures position where there is an associated cash position (which together creates a synthetic bond);
- 3. The Staff may buy or sell the following fixed income related derivatives: financial futures including eurodollar futures, Total Return Swaps, Index Swaps, Credit Default Swaps, Interest Rate Swaps, and over-the-counter options as specified in Section V. D. 1. of this Policy; and
- 4. Acceptable strategies include bona fide hedges (to help achieve the target durations) and strategies that result in a more efficient method of implementing the investment objectives of the Portfolio.

B. Restrictions and Prohibitions

1. Uncovered call writing is prohibited.
2. Speculation or arbitrage between two derivatives is prohibited. If a derivative is more attractively priced than the underlying security, the transaction is considered a substitution.

C. Counterparty Exposure for Options, Swaps and Futures

1. Transactions shall be executed with only domestic or non-U.S. brokers registered in the U.S. or the U.K. with a short-term debt rating of at least A1 (Standard & Poor's) and at least P1 (Moody's), or rated on a long-term basis at least A3 (Moody's) and at least A- (Standard & Poor's). The Internal Research Staff shall actively review these brokers.

IX. GLOSSARY OF TERMS

The Fixed Income Glossary of Terms is referenced in the System's Master Glossary of Terms. Definitions for key words used in this policy are located in the Fixed Income Glossary of Terms which is included in the System's Master Glossary of Terms.

Short~~Limited~~ Duration Investment Fund Characteristics

Attachment III

Although both funds are designed to be short~~limited~~-duration in nature, the two investment funds differ in their targeted investment horizon, portfolio objectives, and expected fund participants. While the HQL fund is an appropriate investment for numerous CalPERS sub-strategies, the SDF is designed to be a slightly more aggressively managed short~~limited~~ duration fund for participants having a longer investment horizon that allows for higher monthly return volatility in exchange for higher expected long-term alpha. For instance, the SDF is viewed as an appropriate investment for the “core” portion of the securities lending assets.

Given the different investment time horizons, fund objectives, and expected fund participants, the investment policies that govern the two funds do have some major policy differences and multiple minor differences.

The following table summarizes the basic fund characteristics.

	High Quality LIBOR	Short Duration Fund
Investment Horizon	Less than 30 days	6 - 12 months
Objective	Medium / High Liquidity Capital Preservation Total Rate of Return	Medium Liquidity Total Rate of Return
Participants	Global Fixed Income Domestic Equity Securities Lending	Securities Lending
Liquidity Requirement	High	Medium
Portfolio Duration Constraint	90 Days Max	180 Days Max
Maturity- <u>WAL</u> Constraint		
Fixed Rate Securities	91- <u>90</u> Days	14 months <u>2 years</u>
<u>AAA-Rated Floating Rate Securities</u>	<u>5 Years</u>	<u>7 Years</u>
Minimum Credit Quality		
<u>Asset-Backed Structured Securities (ABS)</u>	AAA	BBB
<u>Home Equity ABS</u>	<u>Not Allowed</u>	<u>O.K.</u>

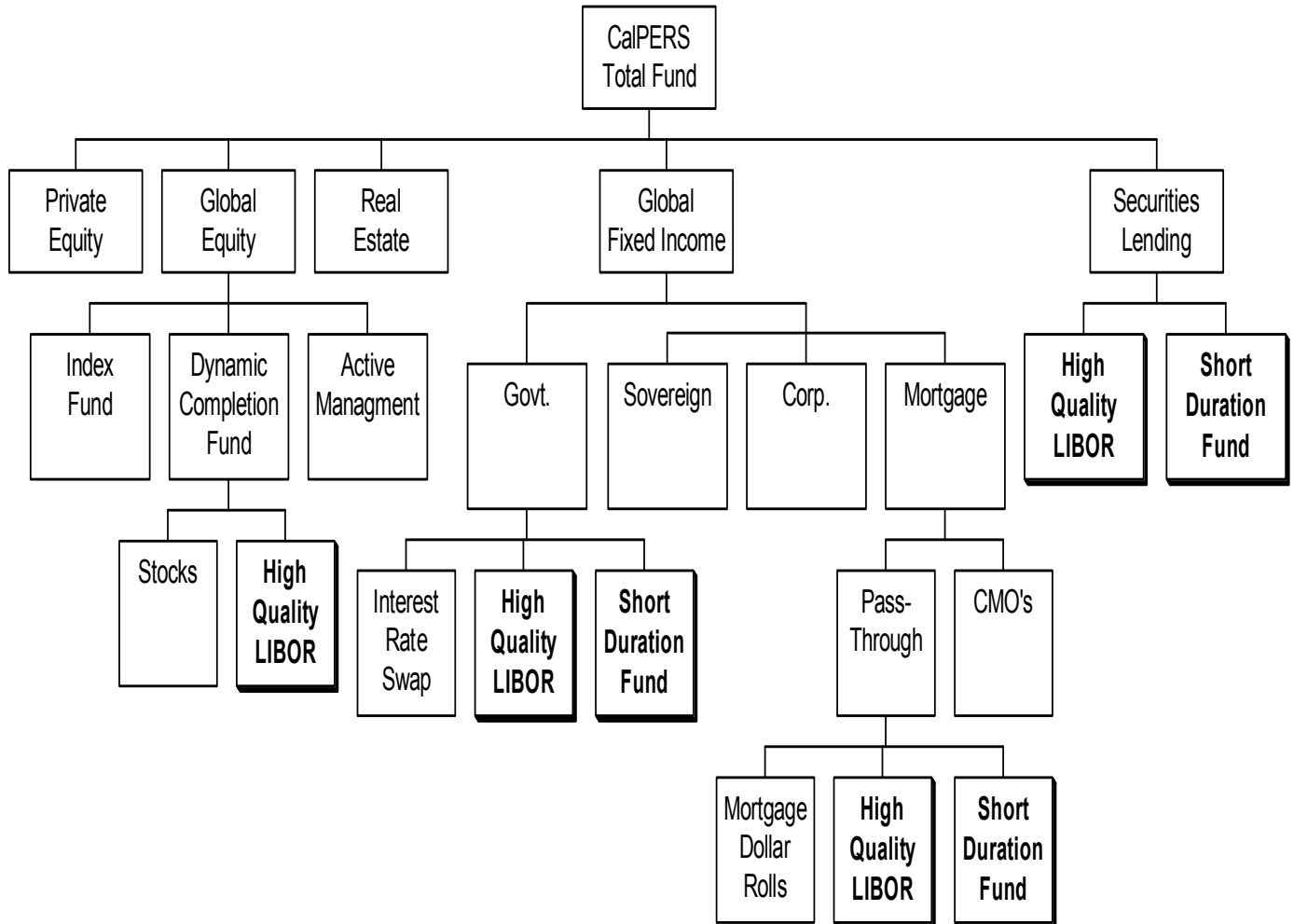
Manufactured Housing ABS

Not Allowed

O.K.

ATTACHMENT IV

SHORT DURATION FUNDS COMPARISON



Arbitrage

The simultaneous purchase and sale of two instruments for the purpose of capturing a pricing disparity between them. The instruments do not need correlated price movements.

~~Asset-Backed Security~~

~~A security collateralized by assets such as automobile loans, agricultural equipment loans, and credit card loans. The loans are securitized by the issuer and usually placed with a trustee.~~

Authority or Agency

A state or local unit of government created to perform a single activity or a limited group of functions and authorized by the state legislature to issue bonded debt.

Average Life

The average length of time expected to take to retire a debt obligation through amortizing payments, through serial maturity, or sinking funds.

Bankers Acceptance

A draft drawn on a bank ordering payment of a particular sum to a specified party at a specified future date. Under a prearranged agreement, these drafts are "accepted" by banks, indicating a willingness to make such payments at the stated time.

Bond

A unit of debt, \$1,000 of principal or par amount. For 200 years municipal bonds were sold in \$1,000 denominations. Since the mid-1970s the minimum bond denomination has been \$5,000; nevertheless, "A Bond" is bought, sold, referred to, and priced as if it were \$1,000.

Break-Even Analysis

Uses results from the scenario analysis. Since all projections should be viewed as risky, evaluating the sensitivity of the projected return to adverse market movements is critical. The break-even analysis calculates the movement required to reduce the sector or portfolio returns to a specified level at some horizon. This analysis creates a form of risk/return ratio. The higher the break-even value, the more the cushion against an adverse movement in rates.

Call Risk Analysis

Examines the portfolio's callable securities and estimates the amount of principal returned for a given drop in interest rates.

CalPERS Custom Daily LIBOR Index

An index developed by State Street Bank to track the monthly return of the One-Month LIBOR. The Index is considered appropriate for the HQL Fund, due to the short nature of the HQL fund and the near universal use of LIBOR as a benchmark in the front end of the yield curve. The Index is identified within the State Street Bank system by the code VI7.

Certificate of Deposit

A debt instrument issued by a bank that pays interest on either a fixed or floating rate, periodically or at maturity and principal when it reaches final stated maturity.

Chief Investment Officer

Heads the CalPERS Investment Office and works with the Investment Committee to develop a long-term investment policy and asset allocation strategy for the Public Employees' Retirement Fund.

Collateralized Loan Obligation (CLO)

A structured debt security backed by a portfolio consisting of secured or unsecured loans made to a variety of corporate commercial and industrial loan customers of one or more lending banks.

Collateralized Mortgage Obligation

A mortgage-backed security that pools together mortgages and separates the cash flows into short, medium, and long classes (often called tranches), allowing a wider range of risk and return characteristics than in the more homogeneous pass-through market.

Commercial Mortgage Backed Security

Securities collateralized by assets that are commercial mortgage loans.

Commercial Paper

An unsecured promissory note issued in the open market to raise short-term funds representing the obligation of the issuing entity.

Convexity

The price change from a move in interest rate that cannot be explained by duration only. Positive convexity (when price rises more than expected and falls less) comes at a cost (lower yield). Negative convexity (price rises less than expected and falls more) usually comes with higher yield.

Corporate

Securities issued in the U.S. market by U.S. corporations or foreign corporations (Yankee bonds).

Corporate Sector

As defined by the System's corporate investment managers in BlackRock Solutions, Aladdin product. Examples of sectors include banking, independent finance, diversified telecom, etc.

Credit Default Swap

A credit derivative transaction in which two parties enter into an agreement, whereby one party pays the other a fixed periodic coupon for the specified life of the agreement. The other party makes no payments unless a credit event, relating to a predetermined reference asset, occurs. If such an event occurs, the party will then make a payment to the first party, and the swap will terminate. The size of the payment is usually linked to the decline in the reference asset's market value following the determination of the occurrence of a credit event.

Credit Rating

A current opinion of an obligor's overall financial capacity (its creditworthiness) to pay its financial obligations. This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. In the case of split ratings, the higher rating of either Moody's, Standard & Poor's, or Fitch Investor Services shall apply.

Custodian

A bank or other financial institution that provides custody of stock certificates and other assets of an institutional investor.

Default

Failure to pay in a timely manner principal and/or interest when due, or a Technical Default, the occurrence of an event as stipulated in the Indenture of Trust resulting in an abrogation of that agreement. A Technical Default can be a warning sign that a default on debt service is coming, but in reality actual debt service interruption does not always occur if the problems are resolved in time. A Technical Default will almost always drive down the price of a bond in secondary market trading.

Derivative

An instrument whose value is based on the performance of an underlying financial asset, index, or other investment. Classes of derivatives include futures contracts, options, currency forward contracts, swaps, and options on futures.

Duration

A measure of price sensitivity to interest rate changes. Duration is the anticipated percentage move in price given a 100 basis point (1 percent) move in interest rates.

Economic Analysis

Examines reference points for indications on what to look for and what events are considered significant in the economy to understand relationships among complex and often seemingly unrelated events. This analysis is used in making decisions concerning duration and sector weightings.

Eurodollar Futures

A standardized agreement traded on the Chicago Mercantile Exchange, to buy or sell Eurodollars at a specified price at a date in the future.

Eurodollars

Certificates of deposit in U.S. dollars in a bank that is typically located outside the U.S., usually a bank in Europe.

Evaluation Date

The targeted date upon which analysis of the portfolio is being performed.

External Manager

An outside money management firm retained under contract by CalPERS.

Fed Funds

Immediately available funds borrowed by banks from certain other financial institutions and government agencies that are exempt from reserve requirements.

Financial Futures

A contract to trade a financial investment, like a Treasury bond, at a specific price and future date. As interest rates rise or fall, the value of such contract falls or rises respectively.

Floating Rate Notes

Securities that have a coupon or interest rate adjusted whenever a predefined change in interest rate occurs. Typically, floating rate notes coupons are based on a short-term rate index.

Floating Rate Security

A bond whose coupon rate is reset periodically (i.e., daily, weekly, monthly, or quarterly). The coupon rate is tied to one of a variety of indices.

Futures

Contracts to buy or sell a standard quantity of a given instrument, at an agreed price, on a given date. A future differs from an option in that both parties are obliged to abide by the transaction. Futures are traded on a range of underlying instruments including commodities, bonds, currencies, and stock indices.

General Pension Fund Consultant

An individual or organization that provides specialized professional assistance to the CalPERS Board of Administration in determining the pension fund's asset allocation model or optimal combination of investments in order to maximize risk-adjusted investment returns in a manner consistent with the State's long-term pension liabilities.

Government Sponsored Securities

Issuer that benefits from sponsorship with or underlying guarantee from a single or multiple sovereign or regional government entity.

Hedge (Hedging)

A strategy used to offset investment risk. A perfect hedge is one eliminating the possibility of future gain or loss.

High Quality LIBOR

A ~~short~~limited-duration, highly liquid, LIBOR-based fund managed by CalPERS staff.

Historical Factors

A review of past relationships and the environment associated with them to assess the relative investment potential of the current market conditions and relationships.

Index Swap

An agreement between two parties to exchange cashflows where the floating side would depend on the return of an index.

Interest Rate Swaps

Private agreements between two parties to exchange cash flows in the future, according to a prearranged formula.

Inverse Floaters

A derivative instrument with a coupon rate, which cannot go below zero, that moves inversely with an index rate like London Interbank Offer Rate or 11th District Cost of Funds Index, usually with a leverage factor. The higher the leverage factor, the greater the price sensitivity.

Investment Grade

A minimum credit rating of Baa3 by Moody's Investor Service or BBB- for Standard & Poor's Corporation, and BBB- by Fitch. Investment grade ratings apply to issuers whose financial risk is relatively low and the probability of future payment relatively high.

Issuer

A state or local unit of government that borrows money through the sale of bonds and/or notes.

Leverage

A condition where a portfolio's market obligation may exceed the market-value-adjusted capital commitment by the amount of borrowed capital (debt).

LIBOR

An acronym for London Interbank Offer Rate. These rates are based on rates quoted by 16 (for U.S. dollars) British Bankers' Association designated banks as being in their view, the offered rate at which deposits are being quoted to prime banks in the London Interbank Market at 11:00 a.m. London time. Of the 16 contributors, the four highest and four lowest rates are eliminated. An average of the remaining eight is taken.

Mark to Market

A method of determining the value of securities by applying current trading prices of similar or identical securities to the securities being valued.

Money Market Fund

Fund that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit, and other highly liquid and safe securities, and pays money market rates of interest.

Money Market Security

A short-term, highly-liquid, and relatively low-risk debt instrument (i.e., commercial paper, certificates of deposit, bankers acceptances, U.S. Government Agency discount notes, bank notes, and Treasury Bills and Notes).

Moody's Investors Service

A nationally-recognized credit rating agency that grades the investment quality of bonds in a 9-symbol system. The ranges extend from the highest investment quality, which is Aaa, to the lowest credit rating, which is C. Securities rated Baa3 or greater are considered investment grade. Securities rated Ba1 or below are considered to be speculative.

Mortgage Backed Security (MBS)

A general term used to describe securities backed by mortgages. MBSs are broken down into four types of securities: mortgage pass-through, mortgage-backed bond, collateralized mortgage obligation (CMO), and stripped mortgage-backed bonds. Mortgage pass-throughs are pooled loans, typically issued by the Government National Mortgage Association, Federal National Mortgage Association, and Federal Home Loan Mortgage Corporation. Mortgage-backed bonds have mortgage loans as collateral, but the term and interest payments are fixed. CMOs are defined above. Stripped mortgage-backed securities have the principal and interest distribution altered from a pro rata distribution to an unequal distribution.

Notes

Intermediate-term, interest-bearing instruments issued by corporations, municipalities, or the federal government with maturities commonly ranging from five to 12 years.

Option (on a Fixed Income Security)

The right or privilege to either buy (call option) or sell (put option) a designated amount of a particular fixed income security or class of securities during a time period ending on the expiration date of the option.

Option Adjusted Analysis

A method that strips out embedded options in securities such as callable bonds and mortgage-backed securities, enabling comparisons with other security types within a consistent framework.

Over-the-Counter (OTC)

The market for securities and traded products that are not listed on the major exchanges. OTC options are options with negotiated premium, strike price, and expiration date.

Partial Duration Analysis

A method that measures the price sensitivity of a security or a portfolio to changes in different parts of the yield curve.

Participation Shares in CalPERS Construction Loan Program

LIBOR or prime-based floating rate construction loans targeted for low- to moderate-income housing located in California. The projects are managed by BRIDGE Housing Corporation and underwritten by leading financial institutions. CalPERS then purchases participation shares in the underwritten construction loans.

Prepayment Speed Assumption (PSA)

The PSA, also referred to as Prepayment Standard Assumption, is a percentage expression of the relationship between the actual and expected CPR based on the PSA prepayment assumption. The PSA ramp assumes the mortgages prepay slower in the first 30 months of seasoning. 100% PSA indicates a starting rate of 0.2% CPR increasing 0.2% per month for the first 30 months. A constant 6% CPR is assumed for the remaining life of the mortgage.

Principal Component Analysis

A method that measures the movements of the yield curve in terms of three main factors: level, slope, and curvature.

Ratings

Various alphabetical and numerical designations used by institutional investors, Wall Street underwriters, and commercial rating companies to give relative indications of bond and note creditworthiness. Standard & Poor's and Fitch use the same system, starting with their highest rating of AAA, AA, A, BBB, BB, B, CCC, CC, C, and D for default. Moody's Investors Services uses Aaa, Aa, A, Baa, Ba, B, Caa, Ca, C, and D. Each of the services use + or - or +1 to indicate half steps in between. The top four grades are considered investment grade ratings.

Real Return Relationships

The historical perspective looking at expected returns, less inflation with the expectation that the real return is mean reverting.

Repurchase Agreement

Agreement between a seller and a buyer, usually of U.S. government securities, whereby the seller agrees to repurchase the securities at an agreed upon price and, usually, at a stated time.

Scenario Analysis

Projects returns over a number of changing situations (such as interest rates, curve twists, spreads, etc.) and weighs each situation to arrive at an average expected return. This process allows comparisons to varying types of securities and portfolios.

Security

Instrument that signifies an ownership position in a corporation (stock), a creditor relationship with a corporation or governmental body (bond), or rights to ownership such as those represented by an option, subscription right, and subscription warrant.

Senior Investment Officer of Fixed Income

The senior investment officer is responsible for all fixed income and reports to the chief investment officer of CalPERS.

Short Duration Fund

A fund managed by CalPERS staff that is designed to earn a return premium versus traditional short duration assets through a modest increase in portfolio duration and by purchasing a broader universe of short duration securities than those typically available to traditional money market portfolios.

Short Selling

Selling securities that are not owned and buying them back later to: 1) take advantage of an anticipated decline in the price; or 2) to protect a profit in a long position.

Sovereign

A security issued by a foreign government or government sponsored agency.

Speculation

Assumption of risk in anticipation of gain but recognizing a higher than average possibility of loss.

Standard & Poor's

A nationally-recognized credit rating agency that grades the investment quality of bonds in a 10-symbol system. The ranges extend from the highest investment quality, which is AAA, to the lowest credit rating, which is D. Securities rated BBB- or greater are considered investment grade. Securities rated BB+ or below are considered speculative.

State Street Bank Short-Term Investment Fund

An institutional money market mutual fund managed by State Street Global Advisors.

Stranded Assets

~~The electric utility industry in California underwent restructuring in January 1998, facilitating increased competition among providers. In the transition to a more competitive environment, electricity providers generated transition costs, commonly referred to as stranded costs. The California Public Utilities Code allows the electricity provider to recover these costs by charging existing, future residential, and small commercial customers. Stranded assets are fixed income securities collateralized by the receivables of electricity providers for recovering stranded costs.~~

Structured Securities

An instrument that is secured by assets like receivables, mortgages, and bonds. Examples of structured securities are asset backed securities, mortgage backed securities, commercial mortgage backed securities, collateralized mortgage obligations, collateralized debt obligations, and collateralized loan obligations.

Supranational Entities

Multinational organizations usually formed for providing financial assistance to less developed countries. Examples of supranational entities include the World Bank and the International Monetary Fund (IMF).

Swap

Private agreement between two companies to exchange cash flows in the future according to a prearranged formula.

Total Return Swap

A swap where the non-floating rate side is based on the total return of an instrument with a life longer than the swap. Total return swaps are also used to transfer credit exposure.

Tri Party Repurchase Agreement

The same as a delivery versus payment repurchase agreement, except that in a Tri-Party Repurchase Agreement, the collateral is delivered to an independent third party trustee, as opposed to the investor's custody bank.

Variable Rate Note

Securities having a coupon or interest rate adjusted periodically on a set date. Typically, variable rate notes have coupons based on a longer-term rate index and are reset once a year or longer.

Weighted Average Days to Maturity

The average number of days that each dollar of unpaid principal due in the portfolio remains outstanding.

Yankee Sovereign

A foreign bond denominated in U.S. dollars that is registered with the Securities and Exchange Commission for sale in the U.S. For purposes of this policy, Yankee Sovereigns must be issued by companies domiciled in G11 countries, Australia, Ireland, or Scotland, and must be rated at least A3 (Moody's) and A- (Standard & Poor's).

Yield Curve

Graph showing the term structure of interest rates by plotting the yields of all bonds of the same quality with maturities ranging from the shortest to the longest available.